Résumé

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Personal Information

- Citizenship: Croatian
- Visa status: U.S.A. Permanent Resident

Technical Skills

- Programming languages: C++, C, Python, Fortran 90
- Symbolic languages: Mathematica, Form
- Scripting/GUIs: Tcl/Tk, shell scripting
- Distributed computing: CORBA, PVM
- Scientific computing: data analysis, mathematical modeling, Monte Carlo and other numerical methods
- Operating systems: UNIX, Windows, NEXTSTEP
- System administration: Linux
- Other: various UNIX tools, HTML, LaTeX

Non-technical Skills

- Exceptional analytical and problem-solving skills
- Strong communication skills
- Extensive teaching experience

Education

- Ph.D. in Physics, University of Wisconsin-Madison, August 1996
  (GPA: 4.00/4.00)
- M.S. in Physics, University of Wisconsin-Madison, May 1994
- B.S. in Physics, University of Zagreb, Croatia, July 1992
  (GPA: 3.96/4.00)

Honors

- University of Zagreb Scholarship (1989-1991)
- University of Zagreb *Best Student Award* (1990)

Work History

- Computer Professional, Fermi National Accelerator Laboratory
  September 1999 – Present (C++, Python, CORBA, shell scripting)
  Worked on CORBA-based object-oriented design for distributed client-server applications. Assisted in the design and development of the data handling software (data grid) for a large high energy physics (HEP) experiment. Designed and developed package for installation and control of the data handling server software in a multi-platform UNIX environment (OSF, IRIX, SunOS, and Linux). Designed and lead development of the test suite used for software quality control, as well as for stress tests and performance monitoring of the entire data handling system. Performed user support duties and troubleshooting for the data handling system. Performed UNIX system administration duties on a cluster of Linux PCs.
- Research Associate, Fermi National Accelerator Laboratory
  September 1996 – August 1999 (C++, C, PVM, Tkl/Tk, Mathematica, Form)
  Developed programs for Monte Carlo simulations in theoretical particle physics. Designed and developed software package for parallel multidimensional integration using the PVM software system. Designed GUIs for HEP applications using Tcl/Tk. Configured and installed various software packages for the Linux PCs, as well as for the Sun and NeXT workstations. Assisted in Linux system administration, data backups and system troubleshooting. Conducted research in the areas of theoretical particle physics and computational physics. Refereed several articles for publication in particle physics and computer science journals.
- Research Assistant, University of Wisconsin-Madison
  January 1994 – August 1996 (C++, C, Fortran 90, PVM, Mathematica)
  Developed software for several projects involving data analysis, mathematical modeling, and various numerical algorithms. Developed distributed applications

based on the PVM software system. Completed several courses in the UW-Madison Computer Sciences Department, which involved large C/C++ programming projects (including file system design, interprocess communication, and design and implementation of a compiler). Conducted research in theoretical particle physics. Assisted in teaching of seven physics courses at undergraduate and graduate levels.

- Teaching Assistant, University of Wisconsin-Madison
  September 1992 – December 1994 (Fortran 90, Mathematica)
  Developed numerical methods for solving transcendental matrix equations. Conducted research in theoretical particle physics. Assisted in teaching of two undergraduate physics courses.

References

- R.K. Ellis
  Scientist, Fermi National Accelerator Laboratory
- L. Loebel Carpenter
  Computer Professional, Fermi National Accelerator Laboratory
- L. Lueking
  Scientist, Fermi National Accelerator Laboratory
- M.G. Olsson
  Professor of Physics, University of Wisconsin-Madison
- S. Parke
  Scientist, Fermi National Accelerator Laboratory
- R. Wellner
  Consultant, Object Environments

Conference Proceedings

1. I. Terekhov et al., *Distributed data access and resource management in the D0 SAM system*, Proceedings of the 10th IEEE International Symposium on High Performance Distributed Computing, 7-10 Aug 2001, San Francisco, California, USA.
2. T.J. Allen, M.G. Olsson and S. Veseli, *Scalar and QCD string confinement*, Proceedings of the 7th Conference on Intersections between Particle and Nuclear Physics (CIPANP 2000), 22-28 May 2000, Quebec City, Quebec, Canada.
3. L. Lueking et al., *The data access layer for D0 Run II: design and features of SAM*, Proceedings of the International Conference on Computing in High Energy Physics and Nuclear Physics (CHEP 2000), 7-11 February 2000, Padua, Italy.

4. T.J. Allen, M.G. Olsson and S. Veseli, *Hybrid mesons and relativistic strings*, Proceedings of the 3rd International Conference on Quark Confinement and Hadron Spectrum (Confinement III), 7-12 June 1998, Newport News, Virginia, USA.
5. T.J. Allen, M.G. Olsson and S. Veseli, *Flux tube vibrations and the excited glue spectroscopy*, Proceedings of the 3rd International Conference on Hyperons, Charm and Beauty Hadrons, 30 June - 3 July 1998, Genoa, Italy.

Publications in Refereed Journals

1. T.J. Allen, C. Goebel, M.G. Olsson and S. Veseli, *Analytic quantization of the QCD string*, Physical Review **D64**, 94011 (2001).
2. T. Coleman, M.G. Olsson and S. Veseli, *Semileptonic form factors - a model-independent approach*, Physical Review **D63**, 32006 (2001).
3. T.J. Allen, M.G. Olsson and S. Veseli, *From scalar to string confinement*, Physical Review **D62**, 94021 (2000).
4. S. Parke and S. Veseli, *Distinguishing WH and $Wb\bar{b}$ production at the Fermilab Tevatron*, Physical Review **D60**, 93003 (1999).
5. T.J. Allen, M.G. Olsson and S. Veseli, *Curved QCD string dynamics*, Physical Review **D60**, 74026 (1999).
6. R.K. Ellis and S. Veseli, *Strong radiative corrections to $Wb\bar{b}$ production in $p\bar{p}$ collisions*, Physical Review **D60**, 11501 (1999).
7. T.J. Allen, M.G. Olsson and S. Veseli, *Adiabatic string shape for non-uniform rotation*, Physical Review **D59**, 94011 (1999).
8. T.J. Allen, M.G. Olsson and S. Veseli, *Excited glue and the vibrating flux tube*, Physics Letters **B434**, 110 (1998).
9. S. Veseli, *Multidimensional integration in a heterogeneous network environment*, Computer Physics Communications **108**, 9 (1998).
10. F.E. Close, I. Dunietz, P.R. Page, S. Veseli and H. Yamamoto, *Gluonic hadrons and charmless B decays*, Physical Review **D57**, 5653 (1998).
11. R.K. Ellis and S. Veseli, *W and Z transverse momentum distributions: resummation in q_T-space*, Nuclear Physics **B511**, 649 (1998).
12. R.K. Ellis, D.A. Ross and S. Veseli, *Vector boson production in hadronic collisions*, Nuclear Physics **B503**, 309 (1997).
13. M.G. Olsson and S. Veseli, *On the bounds for the curvature and higher derivatives of the Isgur-Wise function*, Physics Letters **B397**, 263 (1997).
14. T.J. Allen, M.G. Olsson, S. Veseli and K. Williams, *On quark confinement dynamics*, Physical Review **D55**, 5408 (1997).

15. S. Veseli and I. Dunietz, *Decay constants of P and D wave heavy-light mesons*, Physical Review **D54**, 6803 (1996).

16. S. Veseli and M.G. Olsson, *Sum rules, Regge trajectories and relativistic quark models*, Physics Letters **B383**, 109 (1996).

17. S. Veseli and M.G. Olsson, *Semileptonic B decays into higher charmed resonances*, Physical Review **D54**, 886 (1996).

18. S. Veseli and M.G. Olsson, *S to P wave form factors in semileptonic B decays*, Zeitschrift für Physik **C71**, 287 (1996).

19. S. Veseli and M.G. Olsson, *Radiative rare B decays revisited*, Physics Letters **B367**, 309 (1996).

20. S. Veseli and M.G. Olsson, *Modelling form factors in HQET*, Physics Letters **B367**, 302 (1996).

21. M.G. Olsson, S. Veseli and K. Williams, *Flux tubes in effective field theory*, Journal of Physics **G24**, 545 (1998).

22. M.G. Olsson, S. Veseli and K. Williams, *On the validity of the reduced Salpeter equation*, Physical Review **D53**, 504 (1996).

23. M.G. Olsson, S. Veseli and K. Williams, *On the instantaneous Bethe-Salpeter equation*, Physical Review **D52**, 5141 (1995).

24. M.G. Olsson and S. Veseli, *A one parameter representation for the Isgur-Wise function*, Physics Letters **B353**, 96 (1995).

25. M.G. Olsson, S. Veseli and K. Williams, *Fermion confinement by a relativistic flux tube*, Physical Review **D53**, 4006 (1996).

26. M.G. Olsson, S. Veseli and K. Williams, *Observations on the potential confinement of a light fermion*, Physical Review **D51**, 5079 (1995).

27. M.G. Olsson and S. Veseli, *Relativistic flux tube calculation of the Isgur-Wise function*, Physical Review **D51**, 2224 (1995).

28. M.G. Olsson and S. Veseli, *The asymmetric flux tube*, Physical Review **D51**, 3578 (1995).